

Question 1: Multiple Choice Questions [11 Marks]

1. Mobile Computing limitation(s) is/are:
 - a. Security Standards
 - b. Power Consumption
 - c. Human interface with device
 - ☒ d. All of the above
2. ☒ A cellular network is a wireless network distributed over land areas called cells, each served by at least one fixed-location called:
 - ☒ a. Transceiver
 - b. Dish
 - c. Tower
 - d. Satellite
3. EDGE network stands for:
 - ☒ a. Enhanced Data Generation Edition
 - b. Enhanced Data GSM Evolution
 - c. Enterprise Data GSM Edition
 - d. Enterprise Data Generation Evolution
4. Mobile Apps that are installed on the device and are accessed through icons on the device home screen, might be of type:
 - a. Native App and Hybrid App
 - b. Web-Based App
 - ☒ c. Hybrid App
 - ☒ d. Native App
5. Android Virtual Device (AVD) can't emulate:
 - a. Placing or receiving real phone calls
 - ☒ b. Taking pictures or videos using camera
 - c. Using Bluetooth
 - ☒ d. All of the above
6. Android runtime uses _____ to run android class files.
 - a. Java Virtual Machine
 - b. Java 2 Mobile Edition
 - ☒ c. Dalvik Virtual Machine
 - d. All of the above
7. Application component that performs long-running operations in background with no UI is called:
 - a. Activity
 - ☒ b. Service
 - c. Content Provider
 - d. Broadcast Receiver

8. In Android, R.JAVA file is automatically generated to define:
- ☒ (a.) Resource Identifiers from the layout, strings, pictures, etc..
 - ☐ b. Project structure
 - ☒ c. App permissions list
 - ☐ d. All of the above
9. The manager that is used for compositing windows with off-screen buffering to provides transparency of windows in Android is called:
- ☐ a. OpenGL Manager
 - ☐ b. Media Framework Manager
 - ☒ c. Activity Manager
 - ☒ (d.) Surface Manager
10. The core message system in Android which defines a message to activate a particular component is called:
- ☒ (a.) System Headers
 - ☐ b. Intents
 - ☐ c. Bound Services
 - ☐ d. Broadcast Receivers
11. In Android Activity, _____ lifetime starts with onResume() and ends with onPause() method calls. During this, the Activity is completely visible to the user and is on top of all other Activities so that user can interact with it.
- ☐ a. Entire
 - ☒ (b.) Visible
 - ☒ (c.) Foreground ✓
 - ☐ d. None of the Above

Question 2: True (T) or False (F), if the answer is false, correct the statement. Note, don't negate the statement [14 Marks]

1. If you plan to monetize mobile app contents and encourage purchasing, then the best choice is develop a web-based mobile app. (~~F~~)

2. When you plan to makes frequent mobile app updates, then a hybrid mobile app is the best choice. (~~F~~)

3. Android uses Linux to provide core system services including Security, Memory management, Process management, Power management and Hardware drivers.

(~~T~~)

4. Application component that responds to system wide announcements such as battery low, screen off, date changed is called Explicit Intent. (F) ✓
5. Android mobile apps is governed and controlled by the granted permissions defined in local.properties file. (F) ✓
6. In Android Layout file, the view group is the base class for layouts and views containers. (F) ✓
7. Android Native Libraries are written in C/C++ (T)
8. In Android, Linear, Relative and Table layouts can be used as nested layouts in one Activity. (T)
9. In Android App, when the activity is partially visible to the user but not active and lost focus, then it's in Stopped State. (F) ✓

Question 3: Answer the following Questions Briefly [17 Marks]

1. What is the purpose of AndroidManifest.xml file in the Android and what kind of information it contains (Give three examples)? **[5 Marks]**

The purpose of manifest file that it is contain and define all activities and libraries used in the application also permission used that the app may use. It's also shows which activity is the main to start with. so it's give a briefly discription about the application.

2. There are three prime targets for the mobile devices attackers. List them with brief explanation of each.

[6 Marks]

(+4)

- Data**
- ① ~~Personal~~ private information: like passwords, email, card numbers.
this attack is for steal ~~Identity~~ and use it Illegally.
- ② Personal Public information:
like Internet usage, website visit history, this attack is use for collecting personal information for enhancing others services.
- ③ Both private and public info.
like location, contact, photos, which you need for unknown purposes.
- ③ Availability
- Identity**

3. What is the purpose of the following Android project folders:

[6 Marks]

(6)

- /assets/
contain images, html, ^{js} files that may used in the application.
- /res/values
Contain constant values and items that used in the application.
- /res/menu
Contain menu xml files that used in the application.
- /res/drawable
contain images and shapes used in the application.
- /res/mipmap
Contain application icon which shows on device.
- /res/layout
contain activities xml layout files.

Question 4: Output [6 Marks]

What is the output of the following layout? (Note that default gravity is left)

```
<TableLayout
  android:layout_width="fill_parent"
  android:layout_height="wrap_content" >
  <TableRow
    android:layout_height="wrap_content"
    android:layout_width="match_parent"
    android:gravity="center_horizontal">
    <TextView
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:text="Mobile Computing Test"
      android:gravity="center"
      android:layout_span="3" />
    </TableRow>
    <TableRow
      android:layout_height="wrap_content"
      android:layout_width="match_parent">
      <TextView
        android:text="iOS" />
      <TextView
        android:text="Blackberry" />
      <TextView
        android:text="Android" />
    </TableRow>
    <TableRow
      android:layout_height="wrap_content"
      android:layout_width="match_parent">
      <TextView
        android:text="iOS"
        android:gravity="center"
        android:layout_span="2" />
      <TextView
        android:text="Blackberry" />
    </TableRow>
    <TableRow
      android:layout_height="wrap_content"
      android:layout_width="match_parent">
      <ImageView
        android:layout_span="3"
        android:src="@drawable/ic_launcher" />
    </TableRow>
  </TableLayout>
```

Activity Layout Output

